

REMARKS

Entry of the foregoing, re-examination and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. § 1.116 and in light of the remarks which follow are respectfully requested.

Claims 1, 12 and 14 have been amended to recite that (1) the partially neutralized superabsorbent material is localized in the crotch area of the article, (2) the superabsorbent material having a degree of neutralization greater than the neutralization of the partially neutralized superabsorbent material is located in the ends of the article, and the (3) wetting region comprises at least 40% by weight of the partially neutralized superabsorbent material. Support for this amendment is found at least in the originally presented claims and in the specification on page 22, lines 16-25.

Respectfully, entry of the amendments will place the application in immediate condition for allowance for the reasons that follow. Accordingly, entry of the amendment is proper.

As correctly indicated in the Office Action summary, Claims 1 and 3-14 are pending. The Office Action Summary further indicates that Claims 1 and 3-14 are rejected.

The Rejection Of Claims 1, 3 And 5-14 Under 35 U.S.C. §102

Claims 1, 3 and 5-14 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,685,909 ("*Berg*") for the reasons given on pages 2-3 of the Office Action. Respectfully, Applicants traverse these rejections.

The invention relates generally to absorbent structures for absorbent articles, the absorbent structure comprising (i) a wetting region comprising partially neutralized superabsorbent material; and (ii) a region outside of the wetting region including a superabsorbent material having a degree of neutralization greater than the neutralization of the

partially neutralized superabsorbent material. The absorbent structure has a thickness of about 1 mm to 8 mm when dry, and the wetting region comprising at least 40% by weight superabsorbent material.

In contrast, the asserted document does not disclose each and every feature of the invention. According to the relevant standards, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Berg describes a structure generally having (1) a backing sheet, discussed at least at column 4, lines 10-20, (2) a topsheet, discussed at least at column 4, lines 21-40, (3) an absorbent core, discussed at least at column 4, line 41 to column 7, line 36, and (4) a pH control agent, discussed at least at column 7, line 37 to column 9, line 11.

The "absorbent core" in *Berg* contains a hydrophilic fiber material (*i.e.*, such as cellulose fibers, rayon, polyester fibers, *etc.*) and particles of substantially water-insoluble highly neutralized hydrogel. The hydrogel component is said to be "highly neutralized," *i.e.*, at least 50% (and preferably at least 65%) of the acidic functional groups are neutralized with salt forming cations. *See* column 5, lines 40-44.

The "pH control agent" in *Berg* is said to be kept mechanically separate from the hydrogel material, since the pH control agent can adversely affect the absorption of the hydrogel material. In one embodiment, the pH control agent is incorporated into a topsheet, as in Figure 1; *see* column 9, lines 30-47. The pH control agent is also shown as an insert for the article, separate from the hydrogel core, as in Figure 2; *see* column 9, line 48 to column 10, line 6. In

another embodiment, the pH control agent is in a distinct layer, as shown in Figure 3; *see* column 10, lines 7-48. Alternatively, the pH control agent is also shown as incorporated on or in a water-insoluble, flexible substrate positioned on top of the topsheet of the absorbent article as shown in Figure 3; *see* column 10, line 49 to column 11, line 11.

The pH control agent of *Berg* is never localized only in the wetting region or the crotch region. In contrast, in the presently claimed invention, the partially neutralized superabsorbent material is localized in the crotch area of the article. The conventional superabsorbent material (*i.e.*, the superabsorbent material having the degree of neutralization greater than the neutralization of the partially neutralized superabsorbent material) is located in the ends of the article.

The specification defines the "wetting region" as being in the crotch region, where the major part of the body fluid would be delivered. For example, the specification states on page 1, lines 17-20 that:

The article includes a front part and a rear part between which there extends a crotch part that has a wetting region within which the major part of the body fluid is delivered.

Moreover, the wetting area is generally understood by the person skilled in the art to mean the area where the discharged body fluids first contact the article before they are spread within the article, including outwardly spreading on the surface. The wetting region is, therefore, the area located in the crotch region. The area outside the wetting region is the area located between the edges of the article and the wetting area and not the area located beneath the wetting area. The wetting region is not the entire size of the layer closest to the wearer, just the area of that layer covering the body openings.

The crotch part is where the partially neutralized superabsorbent material is placed. The specification states on page 22, lines 16-25 that:

...the partially neutralized superabsorbent may be placed in the wetting region while placing the conventional superabsorbent outside said wetting region. One advantage of localizing the superabsorbent material that has the lowest degree of neutralization in the wetting area of the article, i.e. in the crotch area of the article, and localizing conventional superabsorbent material in the end parts of the article is that liquid dispersion is enhanced in such a structure from the wetting region to the end parts of said article (emphasis added).

Thus, according to the claimed invention, the superabsorbent material that has the lowest degree of neutralization is located in the wetting area of the article, i.e. in the crotch area of the article. As such, the arrangement in the claimed invention allows for improved total absorption capacity of the absorbent structure, while reducing the danger of gel blocking in the wetting region. This is quite different from the structure disclosed in *Berg*. The partially neutralized superabsorbent material according to the present invention absorbs liquid slowly in order to avoid gel blocking.

Secondly, *Berg* does not teach that the content of the partially neutralized superabsorbent material according to the present invention is at least 40 % by weight. In contrast, in *Berg* the content is less, at most, 30 % by weight. *Berg* discloses that the insert substrates themselves comprise from about 1 % to 30 % by weight of pH control agent and more preferably 5 to 15 % by weight. See column 11, lines 28-31. An absorbent structure according to *Berg* comprises from about 1 % to 30 % by weight of pH control agent and more preferably 5 to 15 % by weight. Further, in the Examples, the pH control agent is present in amounts such as 11, 20, 22% by weight (Table I, Table III). The purpose of the pH control agent is only to control the pH in the absorbent structure in *Berg*. The preferred range 5-15 % by weight and the fact that the function is to control pH, points in the direction not to use the pH control agent in amounts of more than about 22 % by weight, or at the most 30 %, which is the upper limit.

The Examiner stated on page 4 of the Office Action that *Berg* "discloses several possible pH control materials, but those relied upon in the rejection of the claims are the polymers known to have superabsorbent properties." The present amendment clarifies that "the wetting region comprises at least 40% by weight of the partially neutralized superabsorbent material." The "partially neutralized superabsorbent material" does not have superabsorbent properties, since the pH adversely affects the ability to absorb liquids. *See, e.g.*, column 2, lines 35-44 of *Berg*. As such, the wetting region or the crotch region of the presently claimed invention "has at least 40% by weight of the partially neutralized superabsorbent material," which is in contrast to the articles described in *Berg*.

Hence, there are two major differences between the present invention and the structure in *Berg*. First, the partially neutralized superabsorbent material according to the present invention is located in the wetting region, unlike the structure of *Berg*. Secondly, the content of the material according to the present invention is at least 40 % by weight, while in *Berg* the content is less, at most, 30 % by weight.

Thus, the cited *Berg* reference does not teach each and every feature of the presently claimed invention. As such, Applicants respectfully request that the rejection under 35 U.S.C. § 102 be reconsidered and withdrawn.

The Rejection Of Claim 4 Under 35 U.S.C. §103

Claim 4 stands rejected under 35 U.S.C. §103(a) as being obvious over *Berg* as applied to Claim 1 above, and further in view of U.S. Patent No. 5,994,614 ("*Wada*") for the reasons given on pages 3 and 4 of the Office Action. Respectfully, Applicants traverse these rejections.

As discussed above, *Berg* does not disclose each and every feature of the claimed invention. Furthermore, with respect to Claim 4, *Berg* also does not disclose a structure having a thickness of 1 mm to 3 mm when dry, as acknowledged in the Office Action at page 3.

There is nothing in the secondary reference to remedy these deficiencies. In other words, the skilled person reading *Wada* would not know how to modify the absorbent structure taught by *Berg* to make it as thin as the product is in *Wada*.

It is possible to achieve a thin product according to the claimed invention, because of the location and placement of the absorbent materials. According to the claimed invention, the superabsorbent material that has the lowest degree of neutralization is placed in the wetting area of the article, *i.e.*, in the crotch area of the article. Meanwhile, the "conventional" superabsorbent material (*i.e.*, the superabsorbent material having a degree of neutralization greater than the neutralization of the partially neutralized superabsorbent material) is located in the ends of the article. According to this arrangement, the partially neutralized material absorbs liquids slowly, allowing the liquids to disperse to the edges where the "conventional" superabsorbent material is located. As such, the arrangement in the claimed invention allows for improved total absorption capacity of the absorbent structure, while at the same time reducing the danger of gel blocking in the wetting region. The specification states on page 5, lines 11-14:

...A partially neutralized superabsorbent material according to the invention will, moreover, absorb liquid more slowly than a superabsorbent material that has a higher degree of neutralization. This slower absorption rate of the partially neutralized superabsorbent enables a larger volume of liquid to disperse from the wetting point to other parts of the absorbent structure and therewith enables the total absorption capacity of the article to be utilized to a greater extent...

In stark contrast, when combining *Berg* and *Wada*, a skilled person would not end up with a thickness of 1 to 3 mm, since the insert of *Berg* would be too thick to obtain this. In this regard, *Berg* teaches away from the thickness recited in *Wada* because *Berg* teaches adding an

additional layer or insert containing the pH control agent in a specified amount, which could only increase the thickness, not make it thinner. The arrangement of *Berg* does not suggest making a thinner article, because it would have been expected that doing so would be accompanied by a reduced ability to absorb liquids.

Initially, a proper analysis of the obviousness/nonobviousness of the claimed invention by the USPTO requires consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should practice the claimed invention; and (2) whether the prior art would also have revealed that in so practicing, there would be a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the Applicant's disclosure. *In re Sernaker*, 217 U.S.P.Q. 1, at 5 (Fed. Cir. 1983); and *In re Vaeck*, 20 USPQ2d 1438, 1442 (CAFC 1991).

When so analyzed, it is clear that this rejection is in error because neither of *Berg* nor *Wada* disclose or fairly suggest the originally presented invention, either alone or taken in combination.

Thus, even if the documents would have been combined in the manner suggested by the Official Action, the present invention would not result. Accordingly, Applicants respectfully submit that no *prima facie* case of obviousness has been established. Thus, Applicants respectfully request that this ground for rejection be withdrawn.

For the above reasons, Applicants respectfully submit that withdrawal of the rejections under 35 U.S.C. §§ 102 and 103 would be appropriate.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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Limited Recognition Under 37 C.F.R. §10.9(b)
(See Attached Document)

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